جامعة صنعاء
كلية الطب والعلوم الصحية
دائرة العلوم السريرية الطبية
دفعة بصمه طبيب 31
طب بشري

OPHTHALMOLOGY

Common Questions in Practical Ophth

اللجنة العلمية جروب [C] دفعة بصمة طبيب31

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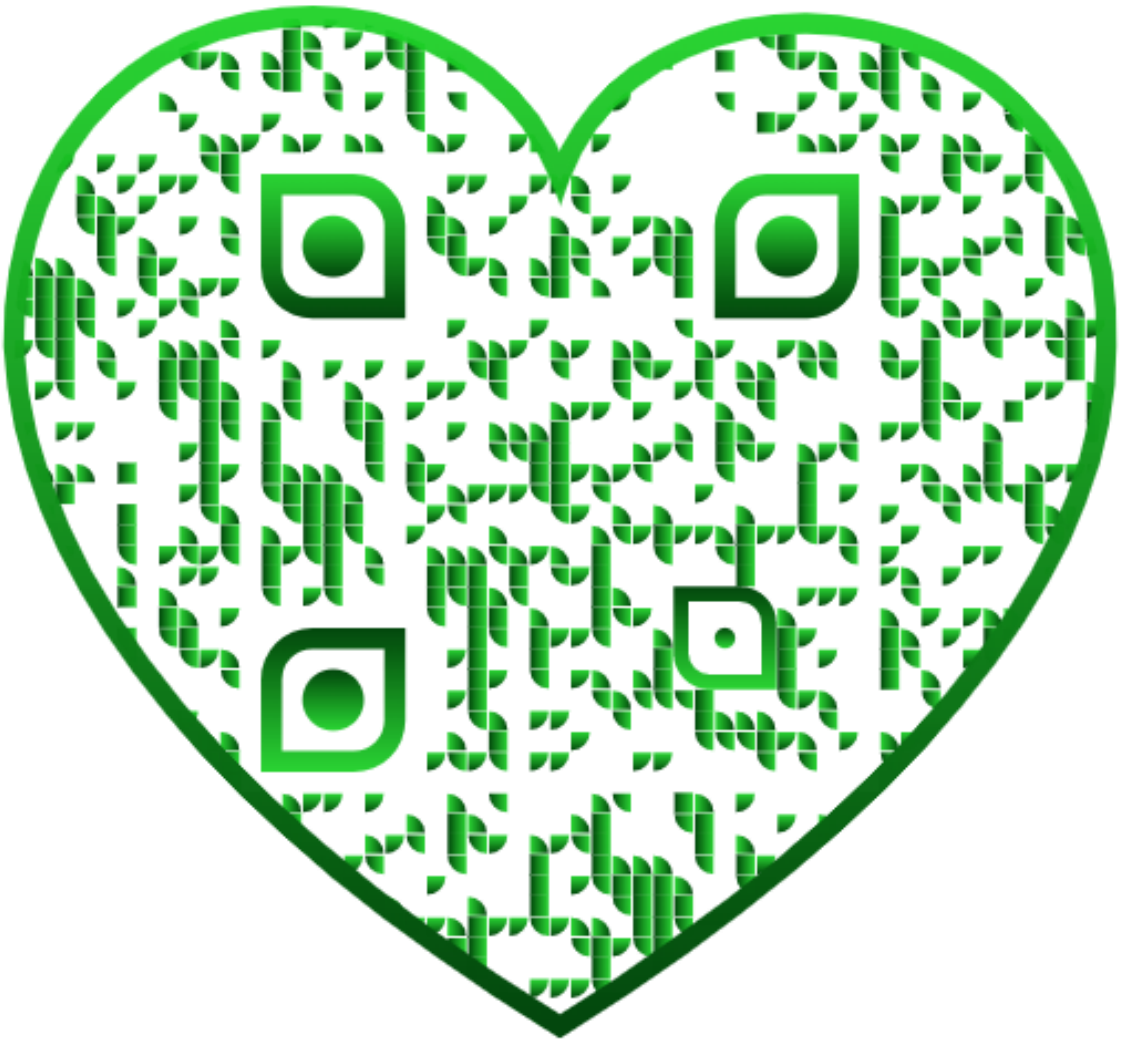
مندوب المجموعة

مسعد الصيادي



حلول أسئلة كارة العيون على - Group C - 31 Batch

د/ هويدة السيسي :-

1] Mechanism of Amblyopia ?? (Lazy Eye)

Defin: Function loss of vision without organic cause

Mechanism : ① Lack of adequate visual stimulation during infancy → causing visual deprivation.

② is based on abnormal binocular interaction.

2] Complication of myopia ?? ① squint ② Complicated Catarct ③ Viterous degeneration ④ Retinal changes — etc.

1- Complicated Cataract.
2- Squint.
3- Vitreous degeneration.
4- blue discoloration of Sclera.
5- Retinal changes - Temporal crescent
- Tigroid Fundus
- Choroide - Retinal degeneration.
- Retinal detachment.
- post. staphyloma.

3] Types of Retinal detachment :-

1- Rhegmatogenous Retinal detachment (Primary = Simple)
2- Traction Retinal detachment (Diabatic / Trumatic)
3- Exudative (serous) Retinal detachment.

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4] Diabetic retinopathy ??

⇒ it's micro-angiopathy affecting the Retinal arterioles, Capillaries & Venules ((Bilateral & usymmetrical)

* Staying of diabetic retinopathy :-

1- Simple Background diabetic Retinopathy.
2- Pre-proliferative // //
3- Proliferative diabetic Retinopathy.

5] Causes of Pinfull Red Eye ??

1- Acute congestive glaucoma (ACG)
2- Acute anterior Uveitis (AAU)
3- Corneal Ulcer (CU)
4- End / Panophthalmitis.
5- Acute membranous / Purulent Conjunctivitis
6- Acute scleritis
7- injury -

6] Types of myopia & treatment ??

* Types of Myopia :-

A- Refractive myopia
1- Curvature myopia
2- Index myopia.

B Axial myopia
- Simple myopia.
- Progressive myopia.
- Congintal myopia.

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Treatment of myopia :-

(A) optical treatment :-

1- Glasses :- Concave spherical glasses.

2- Contact lens.

(B) General treatment For (Progressive myopia)

- Vit-A, D and Calcium.
- Near work → in good illumination in good position - At suitable distance avoid much close work
- Tissue extract → as Placental Extract

(C) Refractive surgery :-

1- Excimer laser and LASIK
2- Radial Keratotomy (RK)
3- Intraocular lens (IOL)
4- Removal of lens.

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(7) Symptoms of Retinal detachment ??

1- Photopsia -2- muscae volitans
3- visual field defect -4- micro-macro-psia
5- Sudden Painless Loss of vision

(Photopsia & floaters) → absent in ① Traction RD ② Exudate RD.

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د/ ابراهيم الوزير

* Trachoma :- Chronic specific infective inflammation of (Conjunctiva & Cornea).
Caused by Atypical Virus → (chlamydia trachomatis)
(Serotype) → (A, B, Ba, C)

* WHO classification of Trachoma :-

"FISTO"

TF → trachomatous Follicular.

TI → trachomatous Intense inflammation.

TS → trachomatous Scarring.

TT → trachomatous Trichiasis.

CO → (Corneal Opacity).

* Trichiasis :- Misdirection of lashes → Rubbing against the Cornea & Conjunctiva, causes (Entropion)
(Surgery upper lid → Van millengens operation
lower lid) Webster's operation.

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* Entropion :- Inward rolling of Eyelid margin

#

* Ectropion :- Outward rolling of Eyelid margin.

(3) Transprence Structure of Eye ??

1- Conjunctiva (semi-transparent.)
2- lens. 3- Cornea. 4- Pupil
5- Aqueous humour 6- Vitreous
7- Retina

تعريف / إبراهيم الفرايه

(4) Definition of Glaucoma ??

* Optic neuropathy in which there is ↑ in IOP which is high risk factor associated optic disc change and visual Field change.

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5] **Hypermetropia ??** it's Condition of refraction in which parallel rays come to focus in a point behind the Retina @ accommodation at Rest.

* Types : ① Axial hypermetropia.
② Refractive hypermetropia.
③ Pathological.

* Treatment : (A) Mild degree = No symptoms ⇒ So No ttt
(B) High degree = ① optical correction by :- Glasses (convex lens) - Contact lens - ② Surgical ttt :- - PRK & LASIK - Phakic IOL - Epikerato Phakia

6] **Astigmatism & its treatment ??**

Astigmatism = is the condition of Refraction when Eye dose Not have the same Power of Refraction in all meridia.

Types ⇒ ① Corneal astigmatism (Common)
- Regual astigmatism.
- irregular astigmatism.
② Lenticular astigmatism (very Rare)

Treatment of Astigmatism :-
1- Simple Regular Asti ⇒ give "Cylindrical lens"
2- Compound & mixed Regular Asti ⇒ give "Sphero-Cylindrical lens"
3- irregular asti ⇒ give Contact lens (Hard)
4- Kertoplasty For ⇒ Kerto Conus & Corneal opacity.
5- Surgical ttt ⇒ LASIK.

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Types of Squint and Diagnosis ??

Squint :- Condition in which the visual axes of the 2 Eyes are Not directed to the same object.
= Deviation of visual axis.

Types :- ① Apparent = False = Pseudo squint.
② True squint.

Types of Types ??

Ⓐ Apparent (False) Squint
1.— Apparent Convergent (Pseudo-esotropia)
2- Apparent divergent (Pseudo-exotropia)
3- Apparent Vertical (Pseudo-hyper or hypotropia)

Diagnosis :- 1- Presence of Cause
2- Cover test 3- Corneal light Reflex.

Ⓑ True Squint :-
1- Latent Squint (hetro-phoria)
Dx :- 1- Cover-uncover test :
2- Maddox Rod (For far)
3- Maddox wing (For near)

2- Paralytic squint
Dx :- 1- Neurological Examination CT & MRI
2- Testing of Ocular motility.
3- Diplopia chart 4- Hess screen.

3- Concomitant Squint
Dx :- 1- testing of Ocular motility 2- Measure V/A
3- Cover test 4- measurement of the angle of Squint by Corneal light Reflex - Perimeter
5- Assessment Binocular Vision

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* Corneal Reflex :- ((blink Reflex))
is an involuntary blinking of the Eyelids elicited by stimulation of the cornea by Corneal touch.

Afferent → Trigeminal Nerve "5th CN"

Efferent → "7th CN" Facial N. → supply the orbicularis → lid closure (Bilateral.)

* Light Reflex :- ((Photo Pupillary Reflex))
Reflex that Controls the diameter of the pupil.

Afferent → optic Nerve "2nd CN"

Efferent → Oculomotor "3rd CN"

Accomodation "Near" Reflex :- is Reflex action of the Eye, in response to Focusing on near object.

Afferent :- optic Nerve.

Efferent :- "Oculomotor" 3CN .3 muscle
1- Constriction Pupillae 2- medial Recti.
3- Ciliary muscles.

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Leukocoria & DDx ??

* White pupillary reflex. DDx :-

1- Retinoblastoma -2- Congenital Cataract.
-3- Congenital corneal opacity 4- Toxoplasmosis
-5- Total Retinal detachment -6- End/Panophthalmitis
-7- Cyclitic membrane -8- Medulloepithelioma.

* What is the membrane that affected in congenital glucoma??

⇒ abnormal mesodermal membrane. (due to Failure of Complete Seperation of iris From Cornea.

* What is the Name of Retinal odema??

⇒ "macula odema" occur when Fluid & Protein deposits collect on or under macula of the Eye. ((Yellow central area of Eye)

* Corneal layers ??

1- The Epithelium → Stratified Squamos type, it Normally replaced within 7days
2- Bowman's membrane → made up of Collagen fibrs (Not Regen)
3- Stroma :- thick ((Strong)) Consist of Keratocytes
4- Descemet's membrane :- thin but strong & elastic Whic can regenerate
5- The Endothelium :- single layer of Flatted hexagonal cell

* Why lens is transparency ??

due to its Structure :-

1- lenticular Capsule → a-cellular envelop and homogenous
2- lenticular epithelium → Single layer of cuboidal cell deep to Ant. Capsule, No posterior Epithelium.

and & Enter & exit of aqueos humor from lens without accumulate it.

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* Why Congintal Catarct is dangerous ??

because the child dosn't Complain so he develop (amblyopia) كسل العين.

* By what Retinoblastoma is diagnosed ??

1- Rapid IOP. 2- Lactic dehydrogenase level Raised in aqous humor.
3- Calcification in 75% cases
4- Ultrasonography and MRI for Confirm Dx.

* Most Common Causes of blindness ??

1- Cataract 2- Refractive error (↓V/A)
3- Corneal opacity 4- Childhood blindness
5- Glaucoma 6- Diabetic retinopathy
7- Trauma

* Red Eye Reflex ??

is a reflex of light throw the normal ocular media and it is Due to coloure of the Blood in Choroid.

→ 50 cm of distance b/w Examiner and patient.

* What will happened for Retina & vitreous after trauma ??

1- Retinal odema 2- Retinal Age 3- Retinal tear / detachment

EP
- Rapid failure of vision to H.M
- Retina = milky white post. part
- Macula = Cherry Red Spot.

Rest # Vitreous trauma → Hyphema / hemorrhage → 2nd glaucoma

وهحفظ باسئلة وسبب نفس أسئلة دكتور إبراهيم العزبي

بتاع أسئلة دكتور إبراهيم العزبي من الفروب السابق :-

*Disc-f Cup Ratio ??

- Optic disc → Circular apparance of begining of optic Nerve
- Optic Cup → Circular opening in center optic disc.

Cup/disc Ratio = 0.5/1.5 = 0.3 mm. its important For Dx and Followup of Glaucoma.

* aqueous humor & its Circulation ??

Composition → • Amino Acid • 98% water, • Eletrolytes • Ascorbic Acid, Glutathione, Immunoglobulins

Function → 1- maintance IOP 2- Nutrition ← posterior corner lens, Anterior vitreous

3- For Refractive indeX 1.33 Diopter

Circulation → Production From ciliary body (Pars plicata)

→ P.C → via Pupile → A-C → out Eye trabecular meshwork

→ Schlemm's Canl → aqueous vein → Episcleral vein

* Ciliary muscles Functions ??

1- Circular muscle :- inner most. attached to Ciliary Processes ** Function → Accommodation

2- Longitudinal muscle :- outermost attached to Supprachoroidal Lamina.

* Function → drinage of aqueous humor.

3- Oblique muscle :- in between Circular & Longitudinal

د/ غزيه شاهين

1] Causes of ptosis ??

(A) Neurogenic → 1- Oculomotor CN III Palsy.
2- Horner Syndrom
(B) Aponerodic → 1- senile 2- post-operative 3- Blepharochalasis
(C) Congenital ptosis (D) Conjunctival Scaring

2] Horner's Syndrom ?? تأثر العضلة ← (Muller's muscle)
Sympathetic trunk damaged

Symptomes & Signs :- 1- Miosis
2- Partial ptosis
3- anhidrosis (↓ sweating)
4- Pseudoenophthalmos.

3] Causes of Red Eye ??

1- Conjunctivitis
2- Keratitis
3- Scleritis
4- Ant. Uveitis
5- Acute glucoma
6- Blepharitis
7- Exophthalmos / Insomnia
8- Subconjunctival Hge.
9- Foreign body in (Cornea / Conjunctiva)
10- trichiasis & Entropion / Ectropion

4] Def. of Squint ?? Condition in which visual axis of 2 Eye not direction of same object (deviation of visual axis)

5] Def. of Hyphema ?? Blood in front A.C
Due to ① Intraocular surgry ② Blunt trauma

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د/ أحمد العبجي

1) layers of the Eye From outer to inner

Eye is Consist of 3 Coats

(A) outer "Fibrous" Coat.
- Cornea
- Sclera.

(B) Middle "Vascular" Coat.
- Iris
- Ciliary body
- Choroid

(C) Inner "Nervous" Coat:
- Retina - macula & Fovea.

2) What are the Drugs that Causes Cataract??

1- Steriod
2- Miotics
3- Gold
4- Anti Psychatic e.g "Phenothrizines"
5- Amiodarone.
6- Busulfan.
7- Chlorpromazine.
8- Anti-Cholinesterase e.g "Neostigmine"

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3] Function of Endothelial layer of Cornea ? and what will occurs of this layer distracted or lost ??

Function of Endothelial layer of Cornea :-
- keeps cornea in condition of relative dehydration and clear.

if this layer distracted or lost lead to
→ Corneal opacity

4] Definition of hyphema & where is found ??

Found Blood in A.C of Eye

Commonly cause ((Truma)) & Surgery.

5] Definition of Anisometropia ??

the condition in which the two Eyes have unequal Refractive power (> 4D)

Causes ① Congenital (Common)
② unilateral aphakia.

~~tt~~ ① contact lens
② Refractive surgery.

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6] In mature senile Cataract
How we diagnosis it ??

① V/A → H.M
② A-C → Normal
③ Lens → total opacity.
④ R.R → absent.

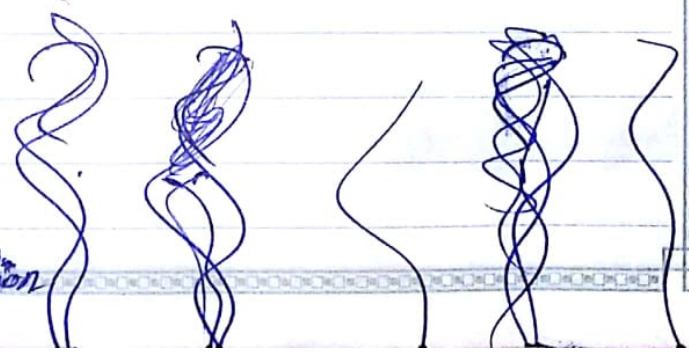
ECCE

7] Differentiation blw Retinoblastoma and cataract in children ??

Retinoblastoma	Cong. Cataract
① Leukocorea	① Leukocorea
② Yellow White Retinal mass	② Squint ③ Nystagmus
③ Pseudo-hypopyon & hyphyma	④ aniridia
④ closed angle glaucoma	⑤ Colobmas
⑤ dilated fixed pupil	

8] What happen if children ē Cataract Stay until age of ≥ 2 years without doing surgical treatment ??
occurs complete

① amblyopia
② Squint
③ Nystagmus
④ Mental Retardation



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Rubeosis : abNormal Blood vessels (Neovascularization) are Found on the surface of the iris.

Causes OF Rubeosis :-

1- Ischemia :- * DM * CRVO * CRAO * Carotid occlusive * Anterior segemnt ischemia

2- Tumor

3- Uveitis

4- Chronic Retinal detachment

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ضغط العين

1- IOP :- Intra-ocular- pressure

- VA ⇒ Visual Acuity.

- DCR :- ⇒ Dacryocystorhiotomy.

- 24.5 mm ⇒ Anterior posterior diameter of Eye.

2) ⇒ [redacted] ⇒ Visual Acuity ? and

[redacted] ⇒ Blindness ??

V/A ⇒ is the ability to appreciate the Form of the smallest retinal image Can seen a certain distance

يعني ⇒ From 3/60 to NLP

3) Etiology of Subluxation and dislocation of lens ??

مسببات / ضغط العين :-

1- Trauma & surgery.

2- Marfan's Syndrome.

3- Marchesani Syndrome.

4- homocystinuria

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د/ سعيدة الإبياني :-

1] Define the:

* → Visual axis : Its the line connecting the macula and object of Regard passing through the Nodal Point.

* → optic axis : it's the line connecting of Cornea - lens - Retina

and what is Name of angle b/w it and in which case becom more and in which Case become low ??

→ Name of angle b/w visual axis & optic axis = Angle Alpha "kappa" = 5 درجات

⇒ Large (more) in Hypermetropes → apparent divergent Squint (exo)

⇒ Small (low) in High myopia → apparent convergent Squint (eso)

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د/ مودة العنبي

1] Diabatic retinopathy and stages :-

Definition :- its micro-angiopathy affecting the Retinal arterioles, capillaries & venules always Bilateral but asymmetrical.

- its Related to duration DM not Related to severity of DM

Stages of DR :-

1] Simple (Background) DR :-

- Retinal Hge → Deep
- Retinal odema
- Retinal Exudate → Deep (Hard)
- Retinal vessels → Miro-anurysm.

2] Pre-Proliferative DR :-

- Retinal Hge → High infaration
- Retinal vesseles → Intra-Retinal micro-vascular abnormalities
- Retinal Exudate → Soft

3] Proliferative DR :- (Pre-Proliferative + New vessels)

- Hemorrhage in { Retina. / Vitreous.
- Tractional Retinal detachment.

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2] Compare b/w Lacrimation and Epiphora ??

Lacrimation	Epiphora
1- ↑ secretion of tears (watery)	↓ Drainage of tear.
Causes :-	* Upper lacrimal passage
1- Emotional	- Ectotropin, Trachoma
2- Corneal ulcer, irritis	* Lower lacrimal passage
3- F.B, Bright light	- Fracture lacrimal bones
	- Tumor (obstruction)

3] Systemic cause of Blindness and mechanism of Endocrine disease in cause of Blindness ??

1- Thyroid gland → Exophthalmus
2- hypoparathyroidism
1- blepharospasm
2- opacities of lens (Cataract)
3- Cataract

Exophthalmus
1- corneal dryness
2- Keratoconjunctivitis
3- Compress optic N. and ophthalmic artery leading to Blindness

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وائل الاصبحي

1) What is Kerato conus, & treatment ؟ العرنية المخروطية

* Congenital weakness of the Cornea mainly affecting the center

* treatment ① glasses.
② Contact lens (Hard) to correct irregular astigmatism.
③ Keratoplasty or Corneal graft
* Laser is contraindicated

؟ متى يتم استخدامه

1) How to Examine the Visual Field ? and what is Name of instrument for Visual Field ?

by ① Confrontation test (Rough test)
② Perimetery → For prephrily field of vision
③ Campimetery (Scotometry) → For Central Field of vision

2) Munson's Sign ** Sign's of Kerto Conus **

→ Bulging of Lower lid when Pt. Looks down V-shaped

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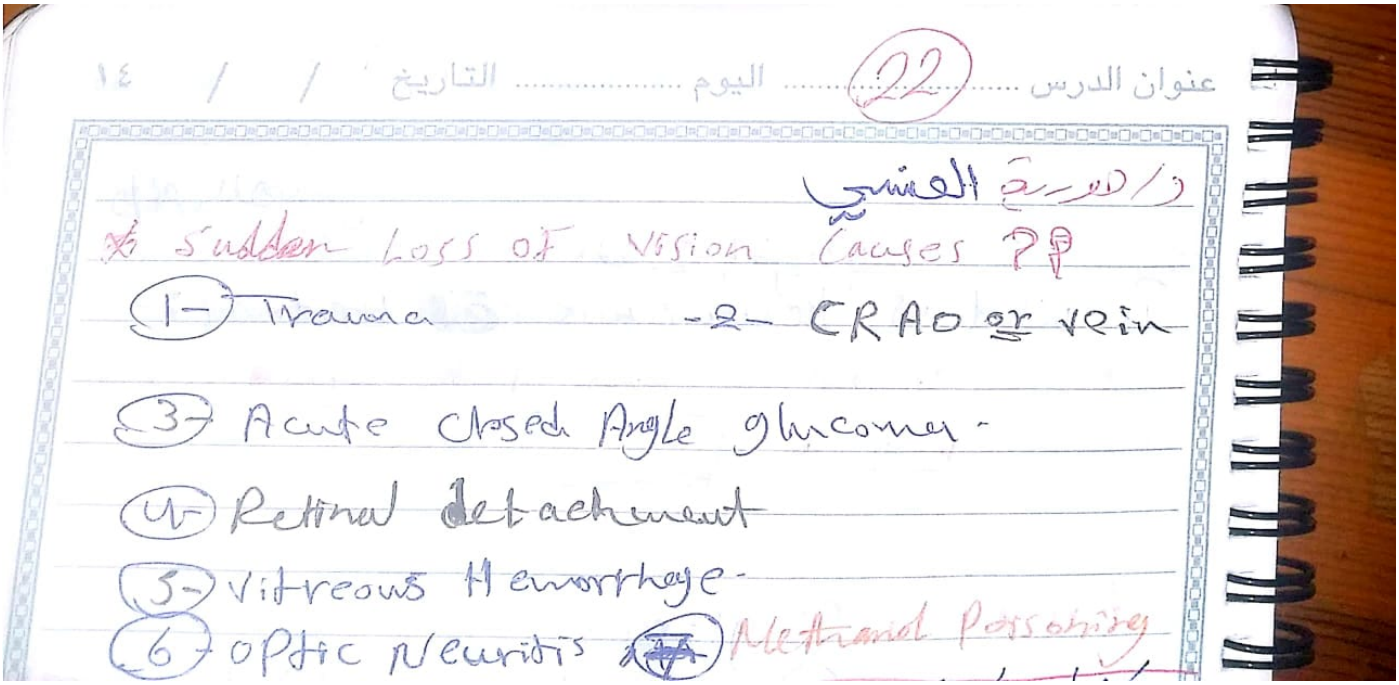
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الدرس العشرين

* Sudden Loss of Vision Causes ??

1- Trauma -2- CRAO or vein

3- Acute closed Angle glaucoma.

4- Retinal detachment

5- Vitreous Hemorrhage.

6- Optic Neuritis (7) Methanol Poisoning

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د/ ابراهيم العزيبي

* Lacrimation (Unilateral) Causes and Complication ??

1. Eye injury in one Eye.
2. Foreign body // //.
3. Entropion
4. Trachoma
5. infections in Anterior Segment Eye as
   - Conjunctivalis, Corneal Ulcer, Iritis

(+) compli cations :- ① atopic dermatitis on skin due to tearing
② Ectropion
③ Epiphora
④ blepharitis

د/ محفوظ باشيوه

1. Kayser-Fleiscler rings. What is Pigment and what is name of disease ??

⇒ Greenish brown Pigment due to copper deposition in Descemet's membraine in cornea // Name of disease /
↳ Wilson's disease.

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مقارنة بين الإثنين

X Compare blw Direct and Indirect of ophthalmoscope

Direct	indirect
- 15 times magnification	- 3→5 times magnification
- mono-ocular عين واحدة	- Bino-ocular = 2 eyes
X we dont see depth	- see depth
- image = erect	image = Inverted
Few vision filed appear	- wide vision field appear ((parriphrary))

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د/ ابراهيم العزبي

Relation b/w DM and glaucoma ??

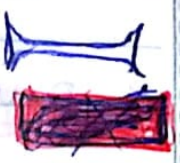
* DM increase IOP by :-

* Neovascular and Hemorrhage lead to

2ry glaucoma.

د/ معتز الفقي

(1) Concave lens - Def. ?
- Uses ?



⇒ Def : Diverging (minus) Power Lens
- thicker at periphery, looked at appear smaller
- more in same direction.

⇒ Uses ?? tt of Myopia.

(2) Convex (Plus +) ⇒ Converging lens

Uses ?? hypermetropia

* Number of Retinal layer and the Name of the First and last layer ??

⇒ 10 layers of Retina :-

1) Pigment Epithelium (outer most layer)

2- Photo-receptors (Rods & Cones) [body]

3- outer limiting membrane.

4- outer Nuclear layer.

5- outer Plexiform layer.

6- Inner Nuclear layer.

7- Inner plexiform layer

8- Ganglion cell layer

9- Nerve Fiber layer

10- Inner limiting membrane.

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